

REMARKS

Status of Claims

The Office Action mailed July 25, 2007 has been reviewed and the comments of the Patent and Trademark Office have been considered. Claims 1-24 were pending in the application. No amendments to the claims were made herein. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claim(s) remain under examination in the application, are presented, with an appropriate defined status identifier.

Allowable Subject Matter:

Applicant thanks the examiner for indicating that claims 6, 12, 18, and 24 contain allowable subject matter.

Prior Art Rejections

In the Office Action, claims 1-24 are rejected under 35 U.S.C. § 103(a) as being unpatenable over U.S. Patent Application Publication No. 2005/0271122 (“Jonsson”) in view of U.S. Patent Application Publication No. 2002/0080743 (“Morita”). Claims 4, 10, 16, and 22 are rejected under 35 U.S.C. § 103(a) as being unpatenable over Jonsson in view of Morita and further in view of U.S. Patent 6,026,115 (“Higashi”). Applicants respectfully traverse these rejections for at least the following reasons.

Claims 1-3, 5, 7-9, 11, 13-15, 17, 19-21 and 23 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Jonsson in view of Morita. Independent claim 1 recites a weighing controlling section that has the ability to “monitor a change in a power level of a sample of each of two or more delay profiles to be used in same power adding processing in delay profile calculation for path search processes and to exercise a weighting control for assigning weight to a power level of a specified sample, according to a result from the monitoring; wherein a judgment as to whether said weighting control is exercised on a specified sample depends upon a number of samples of a candidate for said weighting control.” (Similar language exists in independent claims 7, 13, and 19.) Specifically, if only one sample of a candidate for weighting control exists, negative weight is assigned to a power

level of the sample. If more than one sample exists, negative weight is only assigned if the difference in power levels among the samples meets or exceeds a threshold value. (page 3, lines 5-15) Thus, a weighting control is exercised on a candidate depending upon the number of samples of a candidate for said weighting control.

The outstanding Office Action correctly asserts that Jonsson does not disclose that the invention is employed in a CDMA communication system or the exercising of a weighting control where a judgment as to whether said weighting control is exercised on a specified sample depends upon a number of samples of a candidate for said weighting control. (page 3, paragraph 4 of the Office Action)

The Office Action cites Morita to teach these features of the invention as claimed. Specifically, the Office Action cites the following paragraph:

“The receiving antenna 17 of base station 10 then receives and outputs the feedback signal to weight demodulator 18. The weight demodulator 18 demodulates the feedback signal to obtain the power comparison result and calculated phase difference, and updates the first and second complex-valued weights based on this power comparison result and calculated phase difference. A specific process whereby the weight demodulator 18 updates the first and second complex-valued weights is described below.”
(paragraph 41)

However, there is no teaching, either in this section, or in the disclosure of Morita as a whole, of “wherein a judgment as to whether said weighting control is exercised on a specified sample depends upon a number of samples of a candidate for said weighting control.” (Independent claim 1; similar language appears in independent claims 7, 13 and 19) Rather, Morita teaches that a power comparison result and calculated phase difference are obtained from a feedback signal and utilized to update first and second complex-valued weights. According to Morita, weighted signals are obtained by calculating the complex value product of a complex-valued weight and a data signal after spectrum spreading (paragraph 0018). Thus, by obtaining this information, Morita may potentially be teaching

updating calculation of weighted signals. However, that teaching is not relevant to the invention as claimed.

The invention as claimed requires a judgment be made as to whether to exercise weighting control on a specific sample depending upon a number of samples of a candidate for weighting control. There is no mention in Morita of such a judgment being made, or any determination of when to exercise weighting control in general. Morita is concerned with updating signal weights with good precision (paragraph 0006). There is no teaching or disclosure in Morita of when weighting is to be utilized; rather, it is assumed weighting is utilized in the CDMA communication system.

As shown, neither Jonsson nor Morita teaches or discloses all of the features of the independent claim, specifically failing to disclose “wherein a judgment as to whether said weighting control is exercised on a specified sample depends upon a number of samples of a candidate for said weighting control.” Thus, Morita, either alone or in combination with Jonsson, would also fail to teach all of the limitations of the independent claims. If this rejection is maintained, the examiner is respectfully requested to point out where this feature are disclosed in either Jonsson or Morita.

Claims 4, 10, 16, and 22 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Jonsson in view of Morita and further in view of Higashi. Higashi is directed towards a RAKE receiver utilized in a direct sequence spread spectrum communication system. A RAKE receiver is well-known in the art as a radio receiver that uses sub-receivers that are slightly delayed in order to tune in to the individual multi-path components. These components are decoded separately and later combined. Higashi discusses the usage of weights in column 4, lines 9-12, disclosing that the RAKE combiner “combines the multipath signals with weights to achieve the maximal ratio combining”. There is no other usage of weights in Higashi, nor does the word “weight” appear anywhere else in the disclosure of Higashi, let alone the concept of exercising a weighting control.

The outstanding Office Action asserts that the disclosure of Higashi relating to a combination method of the subpaths teaches assigning weight to the samples for weighing

control, when there are more than one sample and when the difference in power levels among the samples meets or exceeds a change threshold value. However, Higashi's method for combining subpaths deals with amplitudes of the paths, wherein paths with an amplitude less than a smaller threshold are cancelled, paths with amplitudes between two thresholds are combined, and paths with amplitudes higher than the higher threshold are combined later. These amplitudes are characteristics of the paths, not weights that are assigned. Further, there is no comparison of amplitudes between paths before or after combination. The claim language distinctly asserts comparing whether "a difference in power levels among specified samples is a change threshold value or more". Thus, Higashi also does not meet the limitations of the independent claims.

As shown, neither Johnsson nor Morita teaches or discloses all of the features of the independent claim, specifically failing to disclose the ability to "exercise a weighting control for assigning weight to a power level of a specified sample", "wherein a judgment as to whether said weighting control is exercised on a specified sample depends upon a number of samples of a candidate for said weighting control." Higashi does not disclose those features found lacking in Jonsson and Morita. Thus, Higashi, either alone or in combination with Jonsson and Morita, would also fail to teach all of the limitations of the independent claims. If this rejection is maintained, the examiner is respectfully requested to point out where this feature are disclosed in either Jonsson, Morita, or Higashi.

Conclusion

In view of the foregoing amendments and remarks, Applicant believes that the application is now in condition for allowance. An indication of the same is respectfully requested. If there are any questions regarding the application, the examiner is invited to contact the undersigned attorney at the local telephone number below.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check or credit card payment form being in the wrong amount, unsigned, post-dated,

otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

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